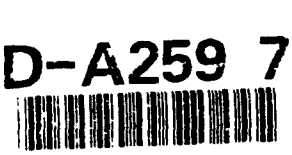

AFIT/GLM/LSM/92S-26

AN ANALYSIS OF THE AIR FORCE ENLISTED PERFORMANCE FEEDBACK SYSTEM

THESIS

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AFIT/GLM/LSM/92S-26

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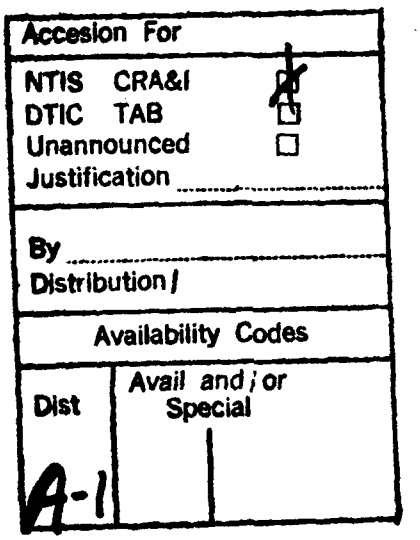

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AN ANALYSIS OF THE AIR FORCE ENLISTED PERFORMANCE FEEDBACK SYSTEM

THESIS

Presented to the Faculty of the School of Systems

and Logistics of the Air Force Institute of Technology

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In Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Acquisition Logistics Management

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Mark A. Ward

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Abstract

This research evaluated the effectiveness of the enlisted evaluation performance feedback system. The Air Force created the feedback system because many airmen, especially those in lower ranks, did not know or did not understand their duties. Therefore, for the purpose of this study, effectiveness was defined as the degree to which the Air Force model mimicked the ideal feedback model as formulated by the researchers' analysis of the literature. The researchers found evidence that the new Air Force feedback system is an improvement over the old design. Under the old system, the only regulated means of providing feedback was a formal report which was issued, on the average, once a year. Since it was a formal rating, it was subject to several problems, not the least of which was a tendency towards inflationary ratings. These problems made the system somewhat ineffective with respect to making it a useful tool for providing feedback to airmen and NCOs. The new procedure, with its regulated informal structure, is much more efficient at providing accurate and timely feedback.

AN ANALYSIS OF THE AIR FORCE ENLISTED PERFORMANCE FEEDBACK SYSTEM

I. Introduction

General Issue.

An effective performance appraisal system can significantly contribute to an organization's productivity (Lee, 1989:91). Therefore, it is in the best interest of the Air Force to have an effective performance appraisal system. From a study conducted by the Air Force Military Personnel Center in 1988, the Air Force concluded that the enlisted evaluation system (EES) was ineffective (Dept USAF, 1990:167). In an effort to increase the effectiveness of that system, the Air Force created a performance feedback procedure.

The Air Force uses a four step process to evaluate airmen and NCOs. The first part of this procedure consists of observing. The supervisor examines any and all aspects of a subordinate's performance. An individual's bearing, behavior, adherence to standards, performance of duties, and quality of work are all closely scrutinized during this period (Dept USAF, 1990:166). The second part of the rating process is the actual evaluation phase in which the rater evaluates the performance of his or her subordinate against specific standards on the performance feedback worksheet (PFW) and enlisted performance report (EPR) (Dept USAF, 1990:166). The supervisor then provides feedback to his or her subordinate using the PFW as a tool (note that the final phase consists of the rater merely recording what was obser[illegible]).

Feedback must be provided to the ratee by his or her supervisor within 30 days of having been assigned to that rater. This performance appraisal is known as the

initial feedback session (Dept USAF, 1990:167). This first session is designed to let the airman or NCO being appraised know exactly what kind of performance the rater expects from him or her. Roughly 180 days after the initial feedback session is conducted, a supervisor must conduct a second performance appraisal. This second meeting, known as the follow-up feedback session, has two primary purposes. First, it allows the rater to discuss the level of performance that the ratee demonstrated from the initial feedback session to the follow-up session. Second, it allows the rater to tell the subordinate what his or her (the rater) future expectations are with respect to that level of performance (Dept USAF, 1990:167). A supervisor is also required to provide follow-up feedback within 30 days of completing an EPR (EPRs are completed on an annual basis). As can be seen, an individual who is newly assigned to a unit will receive, at a minimum, three performance feedback sessions within one year of arriving at this new duty station. It should also be noted that performance feedback was added in 1988 as a result of the revisions made to the EES (Dept USAF, 1990:166). Since the implementation of this innovative program, no formal studies have been conducted on the effectiveness of the new system.

Problem Statement.

The purpose of this research is to evaluate the effectiveness of the enlisted evaluation performance feedback system. The Air Force created the feedback system because many airmen, especially those in lower ranks, did not know or did not understand their duties. Therefore, for the purpose of this study, effectiveness is

defined as the degree to which the Air Force model mimics the ideal feedback model as formulated by the researcher's analysis of the literature.

Definition of Terms.

Table 1 provides the appropriate acronyms and definitions of the terms used in this research:

Table 1

ACRONYMS AND DEFINITIONS OF VARIABLES

ACRONYM	*DEFINITION*
EPR	(Enlisted Performance Report) An EPR is an official record of the ratee's performance provided by his or her rater (Dept USAF, 1990:172).
EES	(Enlisted Evaluation System) The EES, governed by AFR 39-62 and AFP 39-15, establishes the method in which raters will provide written performance feedback and official performance ratings on the individual(s) they rate (Dept USAF, 1990:166).
PFW	(Performance Feedback Worksheet) A PFW is the record used to document the *written communication between the rater and ratee about the ratee's duty performance* (Dept USAF, 1990:167).

Scope and Limitations.

This study was conducted by developing what could be considered the ideal personnel performance appraisal feedback model based on the literature. Not all factors are taken into consideration. Rather, the most critical aspects, as pointed out by the literature, were used in the development of this model.

Research Hypothesis.

The Air Force performance feedback model mimics the ideal personnel performance appraisal feedback model.

Summary and Overview.

Since an effective performance appraisal system can significantly contribute to an organization's productivity, the Air Force should try to ensure they have an effective performance appraisal system. Towards that end, the Air Force recently introduced an official performance feedback session as part of their enlisted evaluation process. However, to date, there have been no formal studies of this new system.

The literature review which follows points to the fact that many civilian organizations have ineffective systems. Unfortunately, these same studies also demonstrated that an effective performance appraisal system can significantly enhance the productivity of an organization. In addition, these studies pointed out that most of the researchers were in agreement as to which factors were significant when it came to determining the effectiveness of feedback. Of these elements, the acceptance of feedback by the recipient appeared to have the most influence. Through this literature review, it was discovered that when comparing the researcher's criteria for an effective system to the Air Force system, the enlisted performance feedback procedure should be remarkably effective, if it is being implemented as designed and if the performance feedback is actually being carried out with the frequency specified by Air Force regulations. Nevertheless, the Air Force is not a civilian organization, and the fact their personnel appraisal system has many of the positive attributes of civilian systems

may not necessarily mean that the Air Force system is, in fact, effective. In order to reach some sort of conclusion to that end, this study was undertaken by the researchers.

II. Literature Review

Introduction.

This literature review focuses on the need for effective performance appraisal systems. Performance feedback is important because it can significantly influence the productivity of an organization (Lee, 1989:91). In fact, some researchers claim that reliable and timely feedback is essential to preserving elevated levels of achievement (Kernan and others, 1991:716). This particular analysis centers on studies which have been conducted on the implementation of feedback systems in civilian corporations.

Three key areas will be examined in this literature review. Initially, poorly implemented systems will be surveyed. The acceptance of feedback will be explored next. Third, feedback models will be scrutinized. Finally, some conclusions will be drawn from the material, and a need for further study will be recommended.

Inadequate Performance Appraisal Systems.

Lee points out many corporations have performance appraisal systems, but most of them are ineffective (Lee, 1989:91). In fact, some systems may actually hurt some organizations. On the other hand, good performance appraisal systems can enhance an employee's attitude by establishing an energetic and dynamic atmosphere in the work place (Lee, 1989:91). There are several potential problem areas pointed out by this article. An organization may suffer from a poorly defined, communicated, adapted, supported, or monitored system (Lee, 1989:94).

Lee suggests an organization can overcome these shortcomings by adhering to several guidelines. Management should decide what kind of system to implement and how the data should be used. Management should also endorse the system they implement to give it validity. They should establish education programs to teach managers and employees how the system works. The system must be flexible enough to be used by every facet of the company. The system must remain current. Therefore, appraisals must be given on a regular basis, at least once or twice a year. To be effective, a corroborative reviewer should be assigned to each performance discussion to verify the facts of the appraisal. The appraisal form itself should reflect the needs of the company. In other words, it should reflect the organization it represents, rather than a copy of an appraisal form used by another organization. Finally, there should be a system set up to periodically check the appraisal system to make sure it is functioning correctly (Lee, 1989:96).

Phillips, like Lee, contends that many organizations use performance appraisals but few evaluation programs work well. He also states there are a variety of danger signals which point to the fact an organization's appraisal system is not functioning effectively. One of the more recognizable ones is employees all have the same performance standards regardless of their current level of responsibility, current level of experience, and previous level of performance (Phillips, 1987:80).

Similar to the problem of like performance standards is that all employees have the same end-of-year rating. From this author's study, he found that most employees, in organizations with performance appraisal systems, receive the same ranking (slightly higher than an average rating). Managers also tend to use an employee's

previous performance report to draft a new one. As a result, an employee's record of performance may appear identical throughout his or her career (some managers change the date of an old appraisal and resubmit it as the new appraisal) (Phillips, 1987:81).

These practices lead to a variety of problems. Employees in this situation believe they are not actually receiving feedback on their performance. In fact, if employees and managers differ significantly on the date when feedback was given, this can also be a danger signal the performance appraisal system is ineffective. Also, employees may be promoted or *carried* in the organization on the basis of performance reports that are invalid. Phillips' article strongly suggests to managers to watch out for these danger signals and take appropriate action (Phillips, 1987:82).

Another danger signal can be seen by observing the way a company delegates authority. Delegation, which is defined as allocating and authorizing work to employees, is a key aspect of management, according to Longenecker. However, despite all the attention this facet of management receives, there are complaints from subordinates in many organizations which point to the fact that delegation is not being carried out effectively. The key complaints are job ambiguity, lack of authority, and infrequent and ineffective feedback (Longenecker, 1991:3).

This author points out that delegation involves three separate but closely related processes. These activities consist of assigning responsibilities, granting authority, and providing accountability. The author also points out these activities must occur on a regular basis. In other words, "it's not a one shot deal" (Longenecker, 1991:3). Longenecker also put forth the idea all of these activities are dependent on each other.

If any of the parts of this triangular relationship (responsibility, authority, and accountability) fail, the entire process of delegation will fail (Longenecker, 1991:4).

In order to implement effective delegation techniques, the author had the following suggestions: (1) On a semi-annual basis, supervisors should compare their ideas of their subordinate's job responsibilities against what their subordinates think their responsibilities are; (2) supervisors should determine the extent of the authority they give their subordinates (if it is inadequate, supervisors could be limiting the effectiveness of their subordinates); (3) supervisors should provide regular feedback to provide accountability and monitor progress (Longenecker, 1991:5).

Another negative attribute of a poorly implemented or designed feedback system is that it may cause subordinates to perform poorly under pressure (Heaton and Sigall, 1991:175). Studies have indicated that the greatest amount of pressure results when an individual is receiving performance feedback in a situation where that individual is behind in their work and one mistake could result in a failed outcome (Baumeister and Steinhilber, 1984:90). Feedback that is ineffective in this particular situation will often cause individuals to *choke under pressure* (Heaton and Sigall, 1991:176). Also when a supervisor has high expectations from a subordinate, the cost of failure is higher than when expectations are not as high (Heaton and Sigall, 1989:1020). It is interesting to note that these expectations, although high, may not specifically require success. In other words, a favorable outcome is not always grounded in a successful outcome from the perspective of some supervisors (Tjosvold, 1985:372). The self-consciousness of the individual receiving the feedback is also an important consideration with respect to how individuals will react to feedback under

pressure. According to a study conducted by Heaton and Sigall, individuals with low self-consciousness (people who focus their attention outward, towards an audience) are more likely to choke when the chance of failure in front of the evaluator is likely. Conversely, individuals with high self-consciousness (people who focus their attention inward, away from an audience) are more likely to choke if a disapproving self-construction (self-construction is the way an individual views himself or herself) is looming (Heaton and Sigall, 1991:185).

The degree to which a person's job requires them to work with other people in a group may also have a significant impact on the effectiveness of performance feedback (Harcum and Badura, 1990:629). A theory called the second-chance hypothesis (also known as the social-loafing effect) states that people will pace themselves according to the amount of work they are required to do in the amount of time they have to do it in (Harcum and Badura, 1990:630). As an analogy, a runner who had to run ten miles would not run at full speed during the first two miles of the run. Rather, the runner would pace himself or herself based on the length of the run and his or her ability to complete the run in a given time. This theory goes on to state that people will tend to produce at a lower rate when working in group activities because they perceive it is only necessary to contribute a minimal amount of effort towards the group's goals in order to achieve them. Why does this phenomenon occur? According to the second-chance hypothesis, typically, it is one individual within a group that contributes the most and directs the group's activities towards their goals. Hence, the other individuals in the group feel that it is not necessary for them to contribute to any great degree (Harcum and Badura, 1990:631). This problem is

exacerbated by the fact that the combined efforts of individuals towards a common goal often obscures the individual sacrifices. Therefore, it is difficult to accurately appraise each individual. People in the group are aware of this fact, and it also contributes to lower productivity from each individual (hence the phrase, social loafing) (Szymanski and Harkins, 1987:891). If these theories are true, it would mean that it would be extremely difficult to implement an effective performance evaluation system for individuals where group projects and teamwork were a significant part of their job.

Harcum and Badura conducted a study in February 1990, in which they tested the second-chance (social loafing) hypothesis. Specifically, they wanted to ascertain what the most crucial variables were with respect to performance. From that experiment, they concluded that the hypothesis was invalid. Rather, they discovered that the existence of specific and rigorously precise job performance standards had a significantly gre impact on individuals than group oriented activities (Harcum and Badura, 1990:635). In other words, if individuals know exactly what kind of work is expected from them, they will typically strive to achieve that goal, regardless of their function within a group setting. It is critical to note that not all studies agree with Harcum and Badura's study. In fact, there is a great deal of inconsistency between most of the studies that have been done in this area. However, most researchers, including Harcum and Badura, concur that this inconsistency arises from the fact that environmental and situational components greatly impact the effectiveness of job standard perception (Harcum and Badura, 1990:637).

Acceptance of Feedback.

Employees who want to do well, according to Lawrie, desire clear feedback on a frequent basis. Annual formal feedback is not enough because it becomes part of the permanent record and can actually be less valid than informal appraisals because of that fact (Lawrie, 1989:22). This article proposes self-appraisal as a more advantageous tool than the formal appraisal. Under this particular concept, employees are asked to appraise the key duties they have performed in the last three months, which results in a focus on concrete and current performance, rather than on the long term and abstract. After they have appraised themselves, these answers are discussed with a trusted associate and their superior, for their analysis of the appraisal (Lawrie, 1989:22). The appraisal is also compared to direct reports. After all the comparisons have been made, the employee looks at areas of convergence to confirm the reports validity. Where there is convergence on areas requiring improvement, he or she can implement changes to that effect (Lawrie, 1989:23).

One of the advantages to this system is the fact it can be done anytime the employee desires feedback. Since this feedback process is informal, it does not have any emotionally charged psychological problems associated with feedback that becomes part of an individual's permanent record. Also, because of the focus of this type of self-appraisal, it can be a powerful indicator of an individual's true performance (Lawrie, 1989:23).

Even if the problem of what kind of appraisal system to implement, such as self-appraisal, is solved, another question still remains. Who should receive performance appraisals? Should feedback only be given to employees on the shop

floor? This is not the case according to Longenecker and Gioia. These authors pointed out organizations in the United States lack effectiveness, and many organizational executives are in large part to blame for this dilemma. A fundamental way in which an organization can improve their effectiveness is by the use of formal appraisals. When formal appraisals are properly implemented, they provide people (including managers) a chance for growth and motivation (Longenecker and Gioia, 1988:41). Longenecker and Gioia pointed out that executives receive little or no feedback from their supervisors, and when they do receive feedback, it is usually inadequate. From the extensive interview they conducted with 60 upper level management personnel, the authors discovered over 40 percent had not received a formal appraisal in over a year (Longenecker and Gioia, 1988:43). Those executives receiving appraisals described them as infrequent, irregular, rushed, and informal. From this interview they also concluded that managers want regular and formal feedback on their performance. In fact, these executives said a bad appraisal was better than no appraisal at all (Longenecker and Gioia, 1988:44).

Longenecker and Gioia have come up with some beneficial advice to help the supervisors of upper level management implement effective appraisal programs with their managers. First, supervisors must realize appraisals are worthwhile. Second, they must conduct formal appraisals. Third, they must avoid the common pitfalls associated with formal appraisal feedback. Finally, they should use appraisals in conjunction with the performance plan (Longenecker and Gioia, 1988:46).

The degree of confidence that subordinates have in the feedback system itself is also viewed by some researchers as a critical aspect of how likely they (the

subordinates) will accept feedback (Orpen, 1991:1336). Further research from an experiment that was conducted by Orpen concurred with the findings of Wexley and Klimoski (Orpen, 1991:1336). From a list of ten variables, Orpen found a significant statistical correlation between *confidence and existence of appraisal systems, frequency of appraisals, self-esteem, and internal control* (Orpen, 1991:1337). His findings suggested that subordinates desired feedback and operated more effectively when they received that feedback (Orpen, 1991:1337). The fact that the subjects in this study desired feedback on a frequent basis is consistent with Longenecker's and Gioia's findings (Longenecker and Gioia, 1988:44). It is also interesting to note that the reward system in this study did not have a notable impact on the effectiveness of the feedback system (Orpen, 1991:1337). In other words, regardless of the level of compensation the subjects in this experiment received for their work, it had no statistically significant impact on the way they accepted feedback. Also, the size and structure of the organization in this experiment yielded statistically insignificant results with respect to the impact of a feedback system (Orpen, 1991:1337).

Because of his findings in this experiment, Orpen also suggested that it might be in the best interest of an organization to raise their subordinates' self-esteem before administering performance feedback to them, since individuals with high self-esteem are more likely to accept feedback (Orpen, 1991:1337). These findings are consistent with research conducted by Tang (Tang and Sarsfield-Baldwin, 1991:567). According to the results of an experiment conducted by Tang and Sarsfield-Baldwin, self-esteem and effort were directly related to the degree to which feedback was effective (Tang and Sarsfield-Baldwin, 1991:571). Tang also noted that even individuals with low

work ethics could be made more productive by effective feedback (Tang, 1990:227). In another study conducted by Tang, he found that those individuals with a low work ethic who received negative feedback showed statistically significant signs of increased intrinsic motivation after the feedback session (Tang, 1990:227). However, it should also be pointed out that individuals with intermediate or high work ethics, experienced increased intrinsic motivation after they received positive feedback rather than negative feedback (Tang and Sarsfield-Baldwin, 1991:571).

The manner in which feedback is administered is also a critical factor when considering the degree to which feedback is accepted. A case in point, MacDonald found that although many corporations provide employees the avenue of self-development through feedback in the form of performance appraisals from assessment centers, many do not take advantage of this opportunity (MacDonald, 1988:50).

Steelcase Inc. employed over 10,000 people in the United States. This company created an assessment center known as the Identification Development Program (IDP). Steelcase compiled data from 299 employees who had been involved with IDP for 12 years in an effort to evaluate who actually used self-development (MacDonald, 1988:50).

From their findings, they discovered some interesting phenomena. The most important factor in determining whether an employee would use IDP for self-development was the logic of the recommendations on their appraisal. In other words, if there was a logical correlation between the recommendations made at IDP and the talents and attributes needing refinement, the subordinate would usually accept it. The age of the employee was also a critical factor. Employees over 40 were less likely to

heed IDP recommendations. Those workers with two or more years of college were more likely to consider the advice given at IDP, suggesting a correlation between education and acceptance. Also, those desiring to attend the center, were more accepting of IDP's advice. Employees who desired promotion or believed they were promotable were more likely to listen to IDP. MacDonald recommends managers take note of these factors when assessing the receptiveness of employees to self-development (MacDonald, 1988:51).

Some researchers disagreed with MacDonald on his findings with respect to age and acceptance of feedback. A study conducted by Shore and Bleicken indicated that the age of the recipient was not a critical factor with regard to how well the recipient would receive feedback (Shore and Bleicken, 1991:1093). They concluded that age did, in fact, play a role in the type of evaluation an individual would receive, but their findings were tempered by the fact that other elements were predominantly responsible for the type of rating an individual received (Shore and Bleicken, 1991:1095). As an example, from the literature Shore and Bleicken analyzed, they found that older workers tended to receive lower marks for interpersonal skills than younger workers. On the other hand, older workers tended to receive higher ratings for self-development than younger workers (Shore and Bleicken, 1991:1095). These ratings were also effected by the age of the supervisors who made the evaluations. This type of interaction is important to note because it brings emphasis back to MacDonald's point that individual's are more likely to accept feedback if they believe it is accurate. Hence, if a supervisor knowingly or unknowingly skews the data from an evaluation because of a subordinate's age, they may be less likely to accept it. In

any case, Shore and Bleicken believe that the inconsistencies between the way a subordinate rates himself or herself is due to a wide range of variables and not solely due to the age of the subordinate (Shore and Bleicken, 1991:1103).

Further investigation supports MacDonald's and Shore and Bleicken's research with respect to the strong correlation between the recipient's perception that the feedback is logical and the acceptance of that feedback (Mikulincer, 1990:739). Mikulincer also believes that when people perceive that the outcome of a task is consistent with the outcome of similar tasks that have occurred in the past, they will tend to look for the same attributes for the current task as those attributes they perceived in the past (Mikulincer, 1990:740). In addition, Mikulincer found a strong correlation between how well a person perceives they understand what the attributional characteristics are for a given event and the degree to which they think the attributional characteristics of the event effected the outcome of performing the task (Mikulincer, 1990:740). For those individuals that either did not have a strong understanding of the attributional characteristics or felt that the attributional characteristics did not have a significant impact on the outcome of the event, they tended to avoid making a judgement as to what the specific causal agents were that affected the outcome of the event (Mikulincer, 1990:740). When one of the two sources of information was strong and the other weak (for example, an individual believed they had a firm grasp on the attributional characteristics which affected the event, but they were not sure whether these characteristics had a strong impact on the outcome of the event), they were likely to believe the information from the stronger source (Mikulincer, 1990:740). However, if both sources of information were strong

and if both sources agreed, the individual was very likely to accept the feedback as being accurate. Conversely, if both sources of information are perceived as strong but contradict each other, the person will choose the information that is most in agreement with their psychology (Mikulincer, 1990:740). One theory suggests that people with strong personal theories in this situation would tend to disregard the data they receive and make a judgement on the degree to which attributes and the types of attributes affected the outcome of an event, based on their particular beliefs alone (Mikulincer, 1990:740). Seligman and others found that most individuals preferred to use the attributional characteristics for a given event to determine the reasons why a particular outcome of an event occurred. It was only when the attributional characteristics for a given event were unclear that individuals relied on their personal theories to determine the attributions (Seligman and others, 1979:242). Mikulincer's research supports these claims which state that individuals are more likely to accept feedback when the attributional characteristics of that feedback are made clear to the recipient (Mikulincer, 1990:749).

Feedback Models.

Bannister and Balkin have created a theoretical model that examines the effectiveness of feedback in performance evaluations and compensation decisions. The object of most evaluation and compensation systems is to increase performance by increasing motivation (Bannister and Balkin, 1990:99). One major process that occurs whenever feedback is given to an employee is that both the source and the recipient of the feedback try to understand exactly why the employee's performance was effective

or ineffective (Bannister and Balkin, 1990:100). One of the biggest points of concern in this area is the supervisor tends to minimize the effect of situational constraints on the employee's performance; things not within the employee's control. Conversely, the employee tends to exaggerate the situational constraints whenever he or she receives feedback, especially when the feedback is negative. This situation increases the likelihood of conflict between the supervisor and subordinate. It makes sense then that if the source of the feedback internalizes (gives credit to the subordinate) for effective performance, the more readily the feedback will be accepted by the receiver. It is also reasonable to assume that if the source of the feedback contributes ineffective performance to situational constraints, the feedback will be more readily accepted by the subordinate (Bannister and Balkin, 1990:102). Because of these constraints, Bannister and Balkin argue for a separation of the link between salary adjustments and performance feedback (Bannister and Balkin, 1990:105).

It is also interesting to note that there seems to be tradeoff between the specificity or exactness of feedback and negativity (Hogarth and others, 1991:749). As the specificity of feedback increases, subordinates tend to learn more. However, with this corresponding increase in exactness comes a similar degree of negativity, and as Bannister and Balkin pointed out, the more negative feedback is, the less likely an individual is willing to accept it (Hogarth and others, 1991:749). Research conducted by (Hogarth and others) also pointed to the fact that people may believe that they have limited control over their environment, and hence, they feel they should not be held responsible for those areas out of their control (Hogarth and others, 1991:750). This conclusion is consistent with Bannister and Balkin's research. Along these same lines,

(Hogarth and others) conducted experiments which lent credence to the argument that subordinates learn how to accomplish their job at a faster rate if they know exactly how job performance (in the case of the experiment, decisions and the outcomes of those decisions) are translated into a score on a performance evaluation instrument (Hogarth and others, 1991:750). In any case, the degree of exactness is a key factor in any performance feedback system since it may determine how efficiently the individual receiving the feedback will learn (Hogarth and others, 1991:734).

Another team of researchers attempted to create a more comprehensive model than Bannister's and Balkin's model. An experiment was conducted by DeGregorio and Fisher in which they studied four different models of appraisal feedback and the responses of the subjects giving and receiving the feedback from the various methods (DeGregorio and Fisher, 1988:605). The four types of techniques they studied in their analysis included no feedback, top-down feedback, simple participative feedback discussion, and private self-appraisal with participative discussion (DeGregorio and Fisher, 1988:607). From this experiment, several key statistical trends were discovered. The smallest increase in productivity occurred in those participants receiving no feedback. Subordinate satisfaction was greatest in the two groups which used participative feedback methods (DeGregorio and Fisher, 1988:614). As to the authors' key hypothesis, they found that there was no statistical significance between the effectiveness of the three types of feedback systems used, although all three feedback systems produced better results than the no feedback method (DeGregorio and Fisher, 1988:615).

The results of DeGregorio and Fisher's experiment are supported by another study which was conducted by Somers and Birnbaum (Somers and Birnbaum, 1991:1081). In their analysis, Somers and Birnbaum found that the literature indicated that evaluation methods that used self-appraisal were not very useful to supervisors with respect to measuring subordinates performance (Somers and Birnbaum, 1991:1081). Although some researchers believe that self-appraisals can help subordinates with personal development, few believe it can be used as an effective evaluation tool (Campbell and Lee, 1988:310). This conclusion would tend to give credence to DeGregorio and Fisher's argument that although self-appraisals are more effective than no appraisals at all, they are not as effective as participative feedback methods. Somers and Birnbaum believe, however, that the self-appraisal method may, in fact, be a valuable evaluation tool. From their research, they concluded that most self-appraisal programs yield poor results because they are poorly implemented (Somers and Birnbaum, 1991:1090). They also believe that if employees are trained on how to use a self-appraisal system which focuses on core job skills, the system might be an effective measurement tool (Somers and Birnbaum, 1991:1090). However, they also listed two significant problems with self-appraisal systems which were not resolved by their study. First, in the particular self-appraisal system they examined, the multi-trait multi-method matrix (MTMM) for self- and supervisory ratings, it was difficult for supervisors to measure the different areas of job performance independently of each other (Somers and Birnbaum, 1991:1089). Second, Somers and Birnbaum were not sure if it was statistically possible to correct the halo

effect, in which subordinates rate their performance, perhaps unknowingly, higher than they actually deserve (Somers and Birnbaum, 1991:1090).

Regardless of the varying attributes of the numerous feedback systems which are used, the simple act of monitoring performance may enhance an organization's productivity (Larson and Callahan, 1990:530). Studies conducted by Mintzberg and Yukl indicate that the process of monitoring performance by itself does not increase productivity. Rather, it is the actions taken towards subordinates by supervisors in response to what the raters observe that contributes to the productivity of an organization (Larson and Callahan, 1990:530). However, in a study conducted by Larson and Callahan, subjects were observed performing tasks but were given absolutely no feedback. Meanwhile, the researchers recorded the subjects' productivity in an effort to ascertain whether the simple act of observing increased productivity (Larson and Callahan, 1990:536). The results of their experiment demonstrated a significant statistical correlation between the effects of monitoring work and the productivity of the individual's being monitored (Larson and Callahan, 1990:536). An interesting part of this experiment was it also demonstrated that the people performing the monitoring function of this experiment could increase the productivity of subjects in a certain area of a certain task by varying the degree of attention they (the monitors) gave to a particular area (Larson and Callahan, 1990:536). Larson and Callahan also demonstrated in their research that an increase in monitoring will not necessarily lead to an increase in productivity. In fact, they pointed out that it might have a detrimental impact. Therefore, the key to effective monitoring is to figure out how much is necessary to induce the maximum amount of

productivity (Larson and Callahan, 1990:536). They also illustrated that studies have indicated that this optimal degree of monitoring will differ from work place to work place and will vary according to job, environment, and attributes of the individual being monitored (Komaki and others, 1989:527). It should be emphasized that their (Komaki) research did not endeavor to assess the impact of feedback after monitoring takes place (Larson and Callahan, 1990:536). Hence, the reader should not infer that this study indicates feedback could not significantly improve productivity.

Another critical aspect of the effectiveness of a feedback model concerns the way in which supervisors react to subordinates' performance. According to numerous studies, there is a significant relationship between a supervisor's locus of control and the way he or she attributes their subordinates performance to ability, effort, task difficulty, or luck (Heneman and others, 1989:466). (Locus of control in this context refers to the way in which a supervisor relies on institutional authority to manage his or her subordinates). Other studies have also shown that the organizational setting has a dramatic impact on the type of locus of control a supervisor is likely to have. (Ashkanasy, 1991:527). Specifically, Ashkanasy found that supervisors in a military environment tended to have a more external locus of control (Ashkanasy, 1991:528). In other words, they used more institutional authority to manage their subordinates. Hence, the way in which they viewed their subordinates' performance was governed by an external locus of control outlook. Ashkanasy also pointed out that organizations which rely primarily on organizational authority typically have a negative attitude towards the performance of their subordinates (Ashkanasy, 1991:528). Also,

supervisors operating in this type of atmosphere, judge their subordinates more harshly than their counterparts who work in organizations which foster an internal locus of control (Tjosvold, 1985:373).

Conclusion.

After examining the articles on performance appraisal feedback, it became clear there are several issues on which the authors drew the same conclusions. Most of the authors agreed that any type of feedback was better than none at all. Unfortunately, these same authors pointed out the fact many organizations were not using a system in dealing with their personnel (including upper level management), and those that did employ a system, did it so infrequently or poorly as to make it ineffective. Most of the cures needed to fix ailing systems that were stressed in these writings revolved around the fact that organizations must first realize that performance appraisal feedback can be an effective and worthwhile tool. Most of the authors also pointed to the fact that employees desire feedback, which is another reason it should be accomplished.

The literature also focused on the importance of an effective performance appraisal feedback system because of the impact it has on the productivity of an organization. Most authors agreed that when the right system is being utilized, it can significantly increase the effectiveness of an organization (although many authors differed on what they thought was the best system).

Despite the varying systems advocated by the authors, they listed pitfalls which were common to all systems, with perhaps the most frequent mistake being feedback

is not accomplished on a *regular* basis. It also seems clear that whatever system is chosen, its design should fit the organization and the people. Many of the authors also pointed out that the receptiveness of the employee could have a dramatic impact on whether the feedback would be effective or not. The authors used a wide variety of measures to test receptivity, from the age of the employee to the employee's perception of the accuracy of the feedback. Whatever measure the authors used, they almost all agreed that the more receptive the employee was to the feedback, the more effective the system was likely to be. Of particular importance to this study is how these findings can be applied to the enlisted evaluation system. Although no formal studies have been done according to this extensive literature review, from personal experience, the researchers have seen situations where enlisted performance feedback was not accomplished. If this is true across the Air Force, it may be unfortunate because it seems that the system as it exists today could be an effective one. The system has many of the positive attributes promoted by the literature. For one thing, it is set up to provide feedback several times a year. It can also be given whenever a subordinate requests feedback. It also avoids emotionally charged psychological problems because it does not become part of an individual's permanent record (Dept USAF, 1990:168). If implemented as designed, the Air Force enlisted performance feedback system can provide an airman or NCO with information on exactly how well they are performing. Also, because it doesn't become a permanent part of their record, it avoids inflationary evaluations.

III. Ideal Feedback Model

Introduction.

As mentioned previously, there is no one ideal feedback model which will fit all organizations. However, there are certain independent variables which are important to all feedback systems (Lee, 1989:95). In this chapter, the researchers will construct a model which will encompass the most important parameters, common to all feedback models. The model will contain the following parameters: demographic dissimilarities of recipients, frequency of feedback, management support of program, appropriateness of system with respect to the organization, and structural barriers.

Demographic Dissimilarities of Recipients.

Demographic dissimilarities of recipients has a twofold meaning in this model. The first refers specifically to individuals who have the same job but have different backgrounds. The second refers to people who have different jobs (their backgrounds may be the same or varied in this case). Job in this context means *the set of all tasks that must be performed by a given worker* (Chase and Aquilano, 1989:431). Either of the above two situations could lend themselves to being the least favorable situation to achieving an effective feedback system (MacDonald, 1988:51). The most important factors, with respect to how workers may differ, are as follows: formal education, vocational or technical (job) skills, salary, tenure, and age. If the organization has a wide variety of jobs which require specialization, a position factor must be added as well. Consider the difficulty of performing feedback on individuals who have a

diversified background but perform the exact same job requiring the exact same skill. The problem stems from the fact that the feedback system must be extremely dynamic since it must deal with such wide variations in the backgrounds of its recipients. Another important point to consider on this issue is that demographic variables effect the receptiveness of people receiving feedback. As an example, older workers who have tenure are less likely to be receptive to feedback than younger workers that do not have tenure (MacDonald, 1988:51). Thus, the more diversified the group which is receiving the feedback, the more difficult it is for management to implement an effective feedback system.

A more desirable situation would be one in which at least some of the important demographic factors of each recipient receiving feedback would be the same. For example, if all the employees in a specific job have the same vocational skills, this demographic factor will have a positive impact on the ease of administering feedback effectively.

Perhaps the most desirable situation for an organization to be in is one in which most of the employees have the same job and the same background. In addition, it would be desirable for the recipients to have background factors which are amenable to receiving feedback, such as youth for example. Since the employees have similar backgrounds and job requirements in this situation, the implementation and administration of a feedback system will tend to be much easier and more effective.

Frequency of Feedback.

Obviously, in organizations which have no feedback system, the frequency of feedback is nonexistent. In some organizations, feedback is performed on an annual

basis only as part of a requirement based on administrative necessity and not as a mechanism to increase the effectiveness of the organization (Lee, 1989:92). Since the purpose of performing feedback in this organization is unrelated to executing an effective feedback policy, this corporation's behavior would tend to mimic organizations whose frequency of feedback is zero.

Some organizations perform feedback only at specified intervals but, on average, more than once a year. Usually, in such corporations, a conscious attempt has been made to implement an effective feedback procedure. However, feedback is rarely, if at all, performed at unscheduled intervals.

The most ideal system would be one in which feedback is performed as often as the subordinate needs clarification on his or her performance (Lawrie, 1989:22). In this ideal situation, this feedback could be performed at the request of the recipient or by being initiated by the subordinate's supervisor.

Management Support of Program.

In some organizations, no feedback, formal or informal, exists at all. In these cases, it can be said that the leadership of the corporation gives no emphasis to a feedback system, since it has not bothered to implement one (Lee, 1989:95).

Almost at this same extreme, some organizations have a feedback system, but the administration of the program is not enforced by the leadership within the organization. Therefore, although a corporation may have the framework of system within their organizational structure, if it is ignored by the leadership of the corporation, it may be as ineffective as those organizations that have no system at all.

Hence, this classification includes organizations which do not have a system and corporations which have a system which really amounts to a paperwork exercise where the performance appraisals look the same from employee to employee and year to year.

A more moderate approach is when organizations have a system which receives some support from upper-level management. As an example, some corporations have a varying degree of success with their performance appraisal systems. In these organizations, certain areas on a performance report may be valid because the leadership within the organization stresses those particular domains. For example, if management stresses that certain skills be accurately recorded for purposes of determining who should receive an increase in pay, the feedback system in that corporation could be used as a valuable tool. However, if this is the extent of the emphasis, the feedback system may be lacking in other areas and could not convey an accurate assessment of the overall performance of subordinates (Lee, 1989:91).

Those feedback systems which enjoy the greatest support from upper-level management are usually the most effective. In these corporations, top management takes an active role in ensuring that their feedback program is being implemented in accordance with organizational goals. Every aspect of the feedback system is carefully monitored by the leadership within the corporation for proper implementation, strict compliance, and flawless accuracy. In these organizations, decisions relating to promotion and position are often heavily correlated with the feedback system.

Appropriateness of System with Respect to the Organization.

How well a particular feedback system fits its organizational structure is critical to determining the degree of effectiveness the system will achieve (Lee, 1989:92). At the lowest level of appropriateness, an organization adopts an existing system from another corporation whose structure is dissimilar from their own, making little or no changes to the system after they adopt it. Obviously, this system will probably have the least chance of success. There are numerous feedback procedures, all of which are designed for a particular kind of organizational layout. The closer a feedback system fits the unique characteristics of an organization, the greater the likelihood it will be successful.

In a more appropriate approach, an organization adopts an existing system from a corporation whose structure is similar to their own, making modifications to fit their organization's particular idiosyncracies. In this moderate approach, an effective system can be implemented.

At the highest level of appropriateness, an organization forms a task force to study the need for a feedback system. The task force creates a unique feedback system, custom-tailored to meet the specific demands of their organization. Provided that the task force is well-equipped and has the prerequisite knowledge on how to design and implement a feedback system, the best possible design for an organizational feedback system can be obtained in this manner.

Structural Barriers.

Structural barriers refers to types of problems an organization might encounter because of the difficulties associated with the type of feedback system they have adopted. Note that these problems do not necessarily equate with obstacles associated with the incompatibility of a specific system with a certain organization. Rather, these problems are inherent with the particular type of system that is adopted, regardless of the structure of the organization. For example, in some organizations, a formal feedback system, in which the feedback becomes a permanent part of an individual's record, is the sole method used by a corporation to provide feedback to its recipients. As described earlier, these types of formal reports suffer from inflation and other problems (Lawrie, 1989:22).

Corporations which have no feedback system have perhaps the largest structural barrier of all by the fact that they have no feedback system. This barrier is usually erected by the leadership of an organization either through ignorance or apathy.

Some organizations have feedback systems but are hindered because of the feedback procedures they are using. Some examples of structural barriers are: Reports may be infrequently released. The reports may only be conducted on certain personnel. The feedback may be limited to a formal report.

A more fitting model would be one in which all or most of the structural barriers were removed from the feedback process in an organization. For example, if a corporation relied solely on formal feedback, they could institute an informal feedback procedure.

A diagram of the ideal feedback model is presented next. It is followed by several figures which list the various model "parameters" with examples of low, medium, or high rankings.

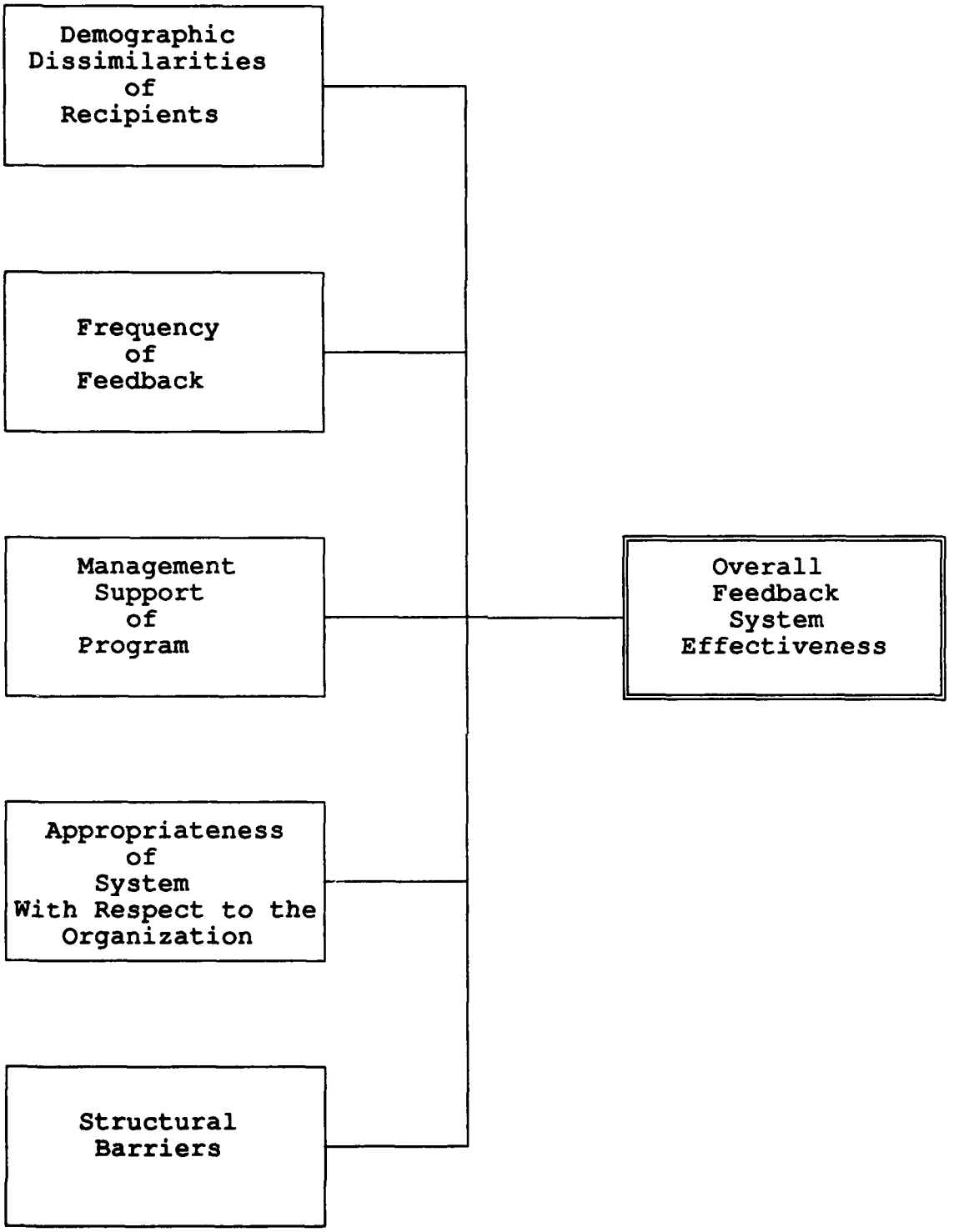

Figure 1. Ideal Feedback Model Parameters

Table 2

DEMOGRAPHIC DISSIMILARITIES OF RECIPIENTS
(BACKGROUND)

Low	Medium	High
There is complete or near complete diversification of each recipient's background with respect to:	There are two to three areas that are similar in each recipient's background with respect to:	There are at least four areas that are similar in each recipient's background with respect to:
1. Formal education	1. Formal education	1. Formal education
2. Technical education	2. Technical education	2. Technical education
3. Salary	3. Salary	3. Salary
4. Tenure	4. Tenure	4. Tenure
5. Age	5. Age	5. Age

Table 3

DEMOGRAPHIC DISSIMILARITIES OF RECIPIENTS
(JOB)

Low	Medium	High
There are a great number of different tasks requiring a high degree of specialization.	There are a variety of jobs, but they do not require a great deal of specialization. -or- Many of the jobs are identical, but they require as great deal of specialization.	All or most jobs are the same or require the same degree of specialization.

Table 4

FREQUENCY OF FEEDBACK

Low	Medium	High
Zero. The organization has no feedback system. -or- Once a year. Feedback is performed as an administration function without regard to increasing the effectiveness of the organization.	More than once a year. However, feedback is performed only at specified intervals.	Frequently. Feedback is performed at the request of the recipient or by being initiated by the subordinate's supervisor, as well as at specified intervals.

Table 5

MANAGEMENT SUPPORT OF PROGRAM

Low	Medium	High
Program does not exist. Hence, leadership gives no emphasis to a feedback system, since it has not bothered to implement one. -or- System exists in an organization, but administration of program is not enforced by the leadership within the organization.	Program receives some support from upper-level management. Certain areas on a performance report may be valid because the leadership within the organization stresses those particular domains.	Program receives strong support from leadership. Top management takes an active role in ensuring that their feedback program is being implemented in accordance with organizational goals.

Table 6

APPROPRIATENESS OF SYSTEM WITH RESPECT TO ORGANIZATION

Low	Medium	High
Organization adopts an existing feedback system from another organization which has a radically different structure from their own. In addition, the organization makes no changes in the adopted system to make it a more effective instrument.	Organization adopts an existing feedback system whose structure is similar to its own, making some minor changes in the adopted system in an attempt to make it more effective.	Organization adopts an existing feedback system whose structure is similar to its own, making major modifications in the adopted system to make it more effective. -or- Organization forms a task force to study the need for a feedback system. Task force creates a unique feedback system which is custom-tailored to the needs of the organization.

Table 7

STRUCTURAL BARRIERS

Low	Medium	High
No feedback system exists. Leadership is ignorant of or apathetic towards the need for a feedback system.	Feedback system exists, but procedures used in the system are a hinderance to the effectiveness of its administration.	Feedback system has few procedural flaws.

IV. Comparison of the Ideal Feedback Model and the Air Force System

Introduction.

Now that the most important parameters of the ideal feedback system have been explored, a comparison between that model and the Air Force System will made. Relationships, or the absence thereof, between the following parameters will be explored: demographic dissimilarities of recipients, frequency of feedback, management support of program, appropriateness of system with respect to the organization, and structural barriers.

Demographic Dissimilarities of Recipients.

In the Air Force, many of the recipients of feedback in the enlisted force have a common background. For example, most enlisted personnel have the same level of education (a high school diploma) (AF Magazine, 1992:27). Almost all recipients of feedback receive the same vocational education at an Air Force technical school. On the other hand, enlisted people have a varied background when it comes to salary, tenure, and age (AF Magazine, 1992:26). This is often true of people who perform tasks that require the same skill. For example, a nineteen-year-old airman first class who is a jet engine mechanic is required to repair engines. On the other hand, a twenty-five-year-old staff sergeant who is a jet engine mechanic probably spends a substantial amount of his or her time repairing jet engines (with some cursory supervisory duties). In essence, they perform the same job, but there is a significant

difference between their pay, tenure, and age. Accordingly, the Air Force obtains a medium ranking on this factor.

In the case in which the types and varieties of jobs are considered, the Air Force also obtains a medium rank. Many of the jobs are identical, but they require a great deal of specialization.

Frequency of Feedback.

The Air Force receives the highest rating with respect to the frequency of feedback. A formal structure exists in which the recipients are urged to request feedback to clear up any misunderstandings about their responsibilities or their job performance. In addition, supervisors are encouraged to use the feedback system to counsel subordinates on their subordinate's area of responsibility and efficiency of performing tasks. Added to these unscheduled feedback sessions, are a host of required meetings which occur periodically throughout each assignment an enlisted person undergoes. For example, as mentioned previously, 30 days after starting a new job or being assigned a new rater and 180 days after this initial period an airman or NCO receives an informal feedback session (Dept USAF, 1990:167).

Management Support of Program.

The Air Force also receives the highest mark in this area as well. A special task force was formed in 1988 to produce and execute the most effective feedback system possible (Dept USAF, 1990:167). Top management was involved in every step of the procedure, during its development and implementation. Before the new system

was fully implemented, a myriad of seminars and briefings were held at the widest possible dissemination explaining the new system to both supervisors and subordinates alike. After the new system was fully implemented, leadership from the wing level to the highest echelons in the Air Force closely monitored its progress. Some minor changes were made to the system, and the speed with which upper-level management reacted to these minor glitches in the system demonstrates their keen interest in ensuring its success.

Appropriateness of System With Respect to the Organization.

The Air Force formed a special task force to create the ideal feedback system for their organization. The feedback system they created was custom-tailored to meet the special qualities of the Air Force organizational structure.

Structural Barriers.

The task force the Air Force created to study the enlisted evaluation system took great pains to ensure that the new feedback system would eliminate the structural barriers which existed in the old system. One of the most important barriers was eliminated by the creation of an informal feedback system, which did not exist in the old system (Dept USAF, 1990:166). This informal feedback system allows the rater to provide feedback to subordinates in a confidential way. By regulation, the rater and the ratee are the only ones who are allowed to see the feedback worksheet. As a result, many problems associated with formal feedback sessions, such as inflated ratings, are avoided.

Another barrier that was removed when the new system was implemented was that of the infrequency of feedback. Under the old system, supervisors were required to provide formal feedback to their subordinate's once a year (except under special circumstances - when an airman or NCO changed raters, for example), and there was no system in place to provide informal feedback. In the new system, formal feedback is still usually only provided once a year. However, an informal feedback structure has been instituted which establishes specific guidelines as to the minimum number of times an airman or NCO will receive feedback. The minimum number of mandatory informal feedback sessions for an airman arriving at a new duty station is three within the first year (Dept USAF, 1990:166). Hence, the number of feedback sessions required by regulation has expanded from one (one formal session) under the old system to four or more (one formal session and three or more informal sessions) within the first year of an airman arriving at a new duty station.

Despite the frequency that an airman receives feedback, enlisted personnel above the rank of master sergeant do not have to engage in informal feedback sessions with their supervisors (Dept USAF, 1990:166). However, that is not to say that they cannot receive feedback. If an enlisted person in or above the rank of master sergeant desires feedback, they can request it. The same is true of their supervisor. If the supervisor of an individual who is in the grade of master sergeant or higher feels that they need feedback, he or she may give this individual informal feedback. Nevertheless, under the new system, there are no institutional requirements which require supervisors to perform informal feedback with people in the upper-echelon of the enlisted tier. This may be the sole criticism of the evaluation system. According

to the literature we studied, all people desire feedback, even those in the upper-management positions (Longenecker and Gioia, 1988:42). If this viewpoint is accurate, perhaps the feedback system should have required informal feedback sessions for higher ranking enlisted personnel as well as for lower ranking personnel. In any case, the task force was extremely successful in their attempt to remove the structural barriers which existed in the old system. For that reason, the Air Force earns a top rating in this category.

When taking all parameters into account, the Air Force feedback system receives an overall excellent rating. Some of the variables which the Air Force has to contend with, such as the demographic dissimilarities of subordinates receiving feedback, cannot be easily changed, if at all. In addition, the task force did a good job of overcoming many of the problems that were inherent in the old system by establishing an informal feedback system.

A diagram of the ideal feedback model is presented which demonstrates the researchers' overall evaluation of the Air Force feedback system. It is followed by several figures which list the various characteristics, broken down by trait, of the Air Force model with a ranking of low, medium, or high.

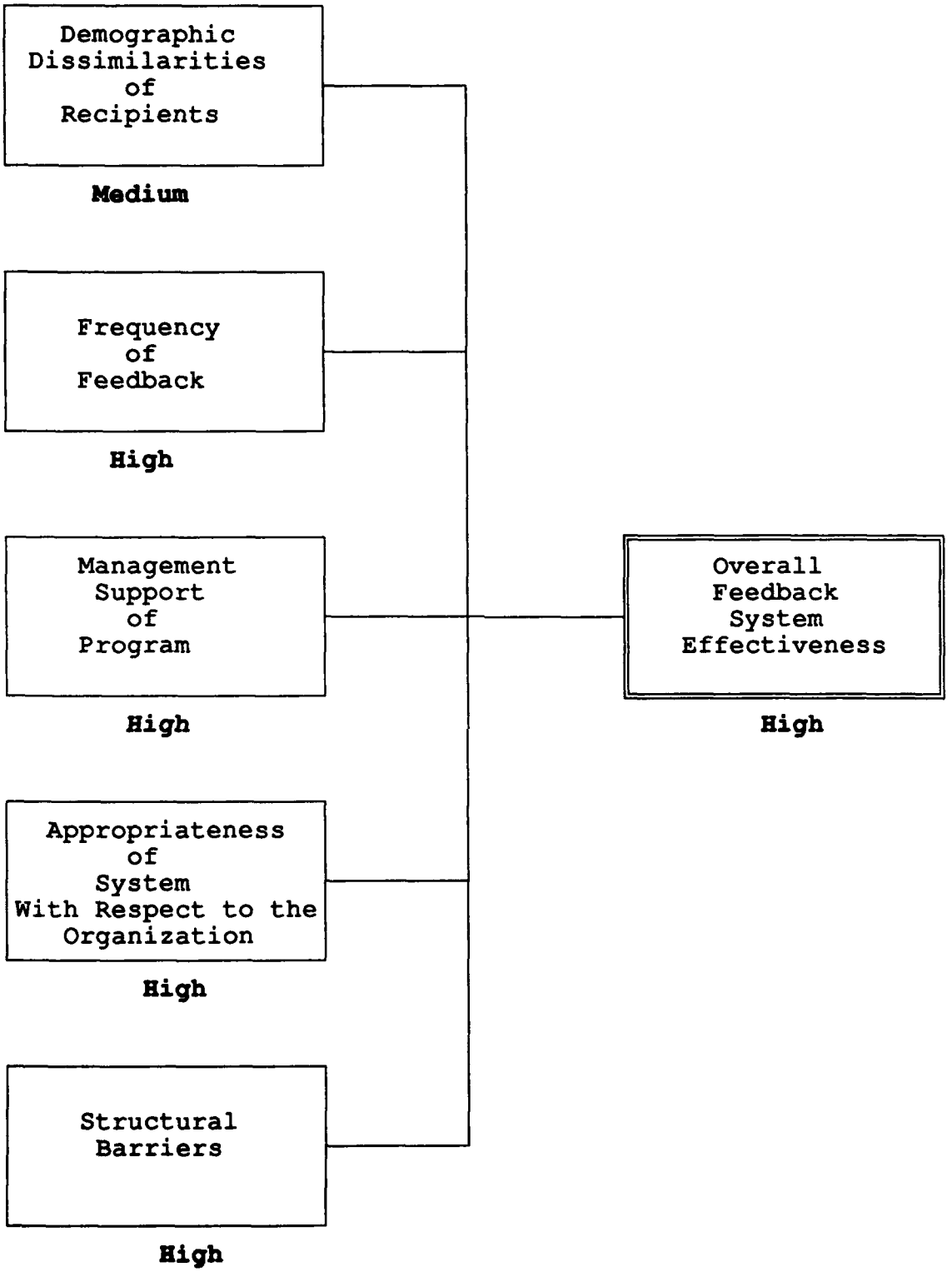

Figure 2. Air Force System Comparison to the Ideal Model

Table 8

UNITED STATES AIR FORCE
DEMOGRAPHIC DISSIMILARITIES OF RECIPIENTS
(BACKGROUND)

Low	Medium	High
There is complete or near complete diversification of each recipient's background with respect to:	**There are two to three areas that are similar in each recipient's background with respect to:**	There are at least four areas that are similar in each recipient's background with respect to:
1. Formal education	**1. Formal education**	1. Formal education
2. Technical education	**2. Technical education**	2. Technical education
3. Salary	**3. Salary**	3. Salary
4. Tenure	**4. Tenure**	4. Tenure
5. Age	**5. Age**	5. Age

Table 9

UNITED STATES AIR FORCE
DEMOGRAPHIC DISSIMILARITIES OF RECIPIENTS
(JOB)

Low	Medium	High
There are a great number of different tasks requiring a high degree of specialization.	**There are a variety of jobs, but they do not require a great deal of specialization.** **-or-** **Many of the jobs are identical, but they require as great deal of specialization.**	All or most jobs are the same or require the same degree of specialization.

Table 10

UNITED STATES AIR FORCE
FREQUENCY OF FEEDBACK

Low	Medium	High
Zero. The organization has no feedback system. -or- Once a year. Feedback is performed as an administration function without regard to increasing the effectiveness of the organization.	More than once a year. However, feedback is performed only at specified intervals.	**Frequently. Feedback is performed at the request of the recipient or by being initiated by the subordinate's supervisor, as well as at specified intervals.**

Table 11

UNITED STATES AIR FORCE
MANAGEMENT SUPPORT OF PROGRAM

Low	Medium	High
Program does not exist. Hence, leadership gives no emphasis to a feedback system, since it has not bothered to implement one. -or- System exists in an organization, but administration of program is not enforced by the leadership within the organization.	Program receives some support from upper-level management. Certain areas on a performance report may be valid because the leadership within the organization stresses those particular domains.	**Program receives strong support from leadership. Top management takes an active role in ensuring that their feedback program is being implemented in accordance with organizational goals.**

Table 12

UNITED STATES AIR FORCE
APPROPRIATENESS OF SYSTEM WITH RESPECT TO ORGANIZATION

Low	Medium	High
Organization adopts an existing feedback system from another organization which has a radically different structure from their own. In addition, the organization makes no changes in the adopted system to make it a more effective instrument.	Organization adopts an existing feedback system whose structure is similar to its own, making some minor changes in the adopted system in an attempt to make it more effective.	**Organization adopts an existing feedback system whose structure is similar to its own, making major modifications in the adopted system to make it more effective.** **-or-** **Organization forms a task force to study the need for a feedback system. Task force creates a unique feedback system which is custom-tailored to the needs of the organization.**

Table 13

UNITED STATES AIR FORCE
STRUCTURAL BARRIERS

Low	Medium	High
No feedback system exists. Leadership is ignorant of or apathetic towards the need for a feedback system.	Feedback system exists, but procedures used in the system are a hinderance to the effectiveness of its administration.	**Feedback system has few procedural flaws.**

V. Conclusions and Recommendations

Conclusions.

There is substantial evidence to indicate that the new Air Force feedback system is an improvement over the old design. Under the old system, the only regulated means of providing feedback was a formal report which was issued, on the average, once a year. Since it was a formal rating, it was subject to several problems, not the least of which was a tendency towards inflationary ratings. These problems made the system somewhat ineffective with respect to making it a useful tool for providing feedback to airmen and NCOs. The new procedure, with its regulated informal structure, is much more efficient at providing accurate and timely feedback.

Recommendations.

In theory, the Air Force has an exceptionally well crafted feedback system. Unfortunately, our research was not designed to test the effectiveness of its administration. In other words, the Air Force feedback system is well-designed, but the researchers were unable to ascertain if the system is being implemented as designed. This is an important question because despite the emphasis the upper-level echelon of the Air Force places on the program and the solid theoretical foundation of the system, it may be poorly implemented.

In order to test the effectiveness of administration, the researchers developed a feedback questionnaire which can test this parameter by examining the perception of enlisted personnel's views on how well they know their duties and responsibilities,

specifically those connected with their job (see Appendix E). In addition, the methodology behind the appropriate statistical tests are also included (see Appendix A). The questions are placed in several like categories for the purpose of performing a linear regression (see Appendix B and Appendix D). The SAS program was developed to help the researcher(s) test the data obtained from the questionnaire. The researcher(s) can evaluate the data obtained from the SAS output through the use of different equations (see Appendix C).

A multiple regression model was created using nineteen independent variables, consisting of performance feedback and demographic factors, and a dependent variable, job knowledge. The first model that should be developed would be that of the second order, or complete, variety. After that model is constructed, a stepwise regression should be performed to determine the independent variables which add to the meaningful predictability of the model with respect to job knowledge. From the results of the stepwise regression, a second model should be developed, incorporating only the independent variables which add significance to the model. ANOVA and Bonferroni tests should be conducted in an effort to detect any biases that may enter into a study as a result of the questionnaire or because of the differences in rank structure or commands.

Any persons attempting to use SAS language in Appendix E should take special precautions with respect to the minimum number of cases that are needed to run the model. Since there are a large number of terms, an absolute minimum of 210 cases must be used in order to avoid receiving an error message. If less than 210 cases are used, the SAS System will return a message which states the model is not of

full rank (SAS Institute, 1985:4). This simply means that there are more variables than are data to plot in the regression. If the reader wants to perform a regression but cannot obtain enough cases to run the complex model, he or she can use the more simplified model which contains no interaction terms.

It is the researchers sincerest desire that this thesis will lay the groundwork for a more in-depth study in which the effectiveness of the administration of the enlisted evaluation system will be measured. Even if future researchers do not use the survey questionnaire and programming language we have provided in this analysis, we hope it will spark an equally rewarding research topic which will yield valuable results to the Air Force.

Appendix A: Suggested Methodology

General Procedures.

The literature strongly suggests that a multiple regression analysis would be an appropriate procedure for determining if there is a relationship between performance feedback and job knowledge.

In order to have an adequately predictive model, it is often necessary to have several independent variables in a regression analysis (McClave and Benson, 1991:522). In our study, the dependent variable, job knowledge, could have been a function of the independent variables, which could have consisted of demographic parameters and performance appraisal effectiveness issues. Table 14 provides a list of the independent variables that could be used:

Table 14

INDEPENDENT VARIABLES

INDEPENDENT VARIABLE	*DESCRIPTION*
x_1	Rank
x_2	Skill level
x_3	Total number of years on active duty
x_4	Highest PME
x_5	Most recent PME
x_6	PME completed by in-residence or correspondence
x_7	Supervisor (yes or no)

Table 14 (Continued)

INDEPENDENT VARIABLES

INDEPENDENT VARIABLE	*DESCRIPTION*
x_8	Most recent Feedback performed
x_9	Performance feedback caused fear, anxiety
x_{10}	Performance feedback was a fair evaluation
x_{11}	Performance feedback was accurate
x_{12}	Performance feedback was understandable
x_{13}	Performance feedback was encouraging
x_{14}	Performance feedback showed areas which needed improvement
x_{15}	Performance feedback helped me understand my job better
x_{16}	Performance feedback was poorly timed
x_{17}	Performance feedback was frustrating
x_{18}	Performance feedback was disorganized
x_{19}	Performance feedback was conducted by a supervisor who was not well trained

The first seven independent variables, x_1 through x_7, are factors which affect job knowledge but are not related to performance feedback. The last twelve independent variables, x_8 through x_{19}, are related to performance feedback. From the model that could be developed from this research, the relationship between

performance feedback and job knowledge could be examined. In addition, a study could be undertaken with the hope of discovering the most important performance feedback variables with respect to predicting job knowledge.

The method of least squares is the procedure used to fit a multiple regression model. The least squares method is a process which builds a model which minimizes the sum of squared errors (SSE) (McClave and Benson, 1991:523). A model could be developed with the assistance of the SAS System, a computer program in statistical applications (Schlotzhauer and Littell, 1987:5).

Stepwise Regression. A second-order model could be created from the original nineteen independent variables measured in this research. The reason a second-order version should be chosen over a first-order model is that it is possible that a second-order model may contribute more information to the predictability of the dependent variable than the first-order type. In the event that a first-order model does actually contribute more than that of the second-order design, the process of completing the stepwise regression would reduce the model from a second-order model to a first-order model.

It is important to observe that by adding the original nineteen variables to the interaction terms and second-order terms, the original model would contain 210 independent variables. Obviously, some of these terms would have more predictive value than others. Hence, it would be necessary to determine how much each of these factors would contribute to the usefulness of the model. For example, it could surmised that it might be possible that the accuracy of performance feedback would affect job knowledge more than the fairness of performance feedback. In order to

determine how the variables weighed against job knowledge, a technique called stepwise regression could be employed since it is one of the most precise methods available to construct a model with numerous independent variables (McClave and Benson, 1991:671). This technique is especially useful when the model contains a large number of multivariate interactions, as would the model in this research (McClave and Benson, 1991:671). Again, this process could be accomplished with the aid of a computer using the SAS System. In the SAS System, the computer first identifies the dependent variable and independent variables. The next part of the procedure, which is called step 1, consists of the program fitting all possible one-variable versions of the model to the data. The computer selects the variable of the model that produced the largest *t* value. In other words, the computer picks the one-variable model which was the best predictor of the dependent variable, job knowledge. This variable is named $\beta_1 x_1$ (McClave and Benson, 1991:671). In the second step, the program checks the remaining variables for the best two-variable form of the model. SAS accomplishes this task by checking all the remaining variables, one at a time, with the variable that was chosen in step 1. After the new variable, named $\beta_1 x_2$, is added, the *t* value is examined again to ensure that it has remained significant, at the specified α level. If the *t* value is no longer significant, the $\beta_1 x_1$ variable is removed, and the program explores the remaining independent variables that will combine with $\beta_1 x_2$ to yield the most significant *t* value. The SAS System examines the *t* value from step 1 to step 2 because the variables β_1 and β_2 may be correlated in some way. If they are correlated, the significance of the *t* value will change. The program continues

to add variables to the model until there are no variables left which significantly contribute to the model's predictive value, at a given α level (McClave and Benson, 1991:672).

It should be pointed out that although this technique is useful in that this process eliminates variables which do not significantly add to the usefulness of the model, the model may be flawed. It is possible that an important independent variable, unknown to the researchers, may be omitted from the variables that were included in the stepwise regression. If such a variable is excluded, this model's predictive value may not be as useful as this procedure might otherwise indicate (McClave and Benson, 1991:672).

Adjusted R^2 Value. After the final model is developed, its usefulness could be examined by calculating its R^2 value. This value ranges from 0 to 1. A value of 0 implies that there is absolutely no fit between the model and the data. On the other hand, a value of 1 indicates a perfect correlation between the data and the model. In this latter case, every point from the sample passes through the model. The higher the R^2 value, the more useful the model (McClave and Benson, 1991:541). However, since the number of independent variables in this study is large, an adjusted R^2 value should be used. The difference between an adjusted and unadjusted value is that the unadjusted reading increases as the number of independent variables increase, although there may not be a true relationship between the independent variables and dependent variable (*Statistix*, 1991:178). An adjusted R^2 value uses a formula to take into account this phenomenon and adjusts the value according to the number of

independent variables. It should be pointed out that there is sometimes a danger of observing a negative R^2 value when it is adjusted for variable size (*Statistix*, 1991:178).

Instrument Development and Testing.

There were several variables which lent themselves to analysis. In this particular study, we developed several pertinent questions relating to the dependent variable, job knowledge, which were relevant to airmen and NCOs. For questions dealing with the independent variables, performance appraisal effectiveness issues, this study used an appraisal interview questionnaire developed by John M. Ivancevich and the GANAT Company (Gibson and others, 1991:700). With some slight modifications to fit this particular analysis, the questionnaire remained faithful to the original research instrument developed by GANAT (Emory, 1991:374). Also, several demographic questions were posed to each respondent that directly related to their job knowledge.

Description of Population and Sample.

We suggest that the sample consist of at least 2,680 enlisted personnel out of population of 200,000, drawn by simple random sample. The population could contain all of the enlisted members of Air Training Command, Air Force Mobility Command, Air Combat Command, for example.

Data Collection Plan.

As is consistent with good research, the survey instrument, a questionnaire, begins with simple items and moves on to more complex issues (Emory, 1991:370). Accordingly, questions 001 through 009 deal strictly with demographic data.

The questions that deal with population characteristics are relatively straightforward. However, the questions dealing with the independent variables concerning performance feedback effectiveness required a more intricate construction. According to the literature, it is prudent to disguise the purpose of the survey instrument in an attempt to prevent any significant biases from entering the study (Emory, 1991:352). One of the ways this study reduced the chance of bias was to assemble the questionnaire in such a way as to ask each question (excluding questions requesting demographic information) concerning a particular area of interest more than once. Each of the questions in each area requested the same information but were phrased in a different manner and were randomly distributed in the questionnaire. Some of the questions were also worded in such a way as to illicit a reverse response when compared to the other questions. The use of this technique allowed the authors of this study to check for consistency between each of the questions that were grouped in similar areas. If no bias had been introduced into the questionnaire, one would expect the responses for each question, within a given area, should be the same.

ANOVA Tables. One of the simplest ways to check for the possibility of bias in the survey instrument was to perform a test of a completely randomized design by comparing treatment means between the questions grouped in like domains (McClave and Benson, 1991:866). The mean calculated from a given question in a given area

was compared against the means of the other questions on the same subject by using an ANOVA table. If the survey instrument were unbiased, the data should indicate that there was no significant difference between the treatment means of questions in like areas. Also the treatment mean which dealt with job knowledge could be examined between the three enlisted rank tiers and between commands. This task should be accomplished in order to investigate the possibility that there may be a significant variation between rank structures or agencies with respect to job knowledge.

Bonferroni Procedure. The ANOVA test reveals whether there is a significant difference between two or more treatment means. However, the results do not indicate which treatment means differ (in most cases, there were more than two treatment means being examined in each area of interest in this study) or by how much they vary. If a significant variation was found between at least two treatment means in a given area, the Bonferroni procedure should be applied to find how means differed and to what extent they vary. This procedure should be chosen over others because it is easy to implement, and the results observed from using this method are conservative in nature (McClave and Benson, 1991:873).

Summary.

A multiple regression model could be created using the nineteen independent variables, performance feedback and demographic factors, against the dependent variable, job knowledge. The first model developed should be of the second order, or complete, variety. After that model is constructed, a stepwise regression should be

performed to determine the independent variables which add to the meaningful predictability of the model with respect to job knowledge. From the results of the stepwise regression, a second model should be developed, incorporating only the independent variables which add significance to the model. ANOVA and Bonferroni tests should be conducted in an effort to detect any biases that may have entered into the study as a result of the questionnaire or because of the differences in rank structure or commands.

Appendix B: Job Knowledge Question Groupings

The following information lists each area that was covered concerning the dependent variable and independent variables. After a brief description of each area, all of the questions that were asked in that particular area (as they actually appeared in the questionnaire) are given:

Question Set 1. (NCOs and airmen understand responsibilities)

010. I understand my responsibilities as an airman/NCO.

012. My obligations as an airman/NCO are clear to me.

020. I do not understand my duties as an airman/NCO.
(A reverse response, in relation to the other questions in this area, is expected.)

Question Set 2. (NCOs and airmen skill levels reflect true level of job knowledge)

011. I feel my current skill level is commensurate with my capacity to accomplish my job.

014. My skill level does not do a good job of measuring my ability to do my job. (A reverse response, in relation to the other questions in this area, is expected.)

016. My job proficiency is accurately reflected by my skill level.

Question Set 3. (NCOs and airmen understand mission of their squadron)

015. I understand the importance of my position within the squadron.

019. I realize the importance of my job with respect to accomplishing the goals of my squadron.

021. The way in which my work impacts the effectiveness of the squadron is not clear to me. (A reverse response, in relation to the other questions in this area, is expected.)

Question Set 4 (NCOs and airmen understand mission of their wing)

013. I have a clear understanding of the role I play in accomplishing the wing's mission.

017. I understand the importance of my position within the wing.

018. The way in which my work impacts the effectiveness of the wing is not clear to me. (A reverse response in relation to the other questions in this area, is expected.)

Performance Feedback Question Groupings.

Question Set 1 (performance feedback caused fear, anxiety)

027. The feedback session really raised my anxiety level.

031. I dreaded the actual feedback session itself.

Question Set 2 (performance feedback was a fair evaluation)

023. The discussion of my performance during the feedback session was covered objectively.

026. The feedback session was fair in every respect.

032. The supervisor was straightforward in all phases of the feedback session.

043. During the feedback session, my performance was analyzed fairly.

046. I was worried that the feedback session worksheet would not be kept confidential.

Question Set 3 (performance feedback was accurate)

022. The performance feedback session covered my entire job.

024. The feedback session was accurately conducted.

044. I was often upset because the feedback data were inaccurate. (A reverse response, in relation to the other questions in this area, is expected.)

045. My record, as it was introduced in the feedback session, contained no errors.

047. Specific examples of my performance were cited.

Question Set 4 (performance feedback was understandable)

025. I didn't have to ask for clarification. (A reverse response, in relation to the other questions in this area, is expected.)

028. The purpose of the feedback session was not clear to me.

037. I disliked the feedback session because the intent was not clear.

Question Set 5 (performance feedback was encouraging)

030. The feedback session was encouraging to me personally.

033. The feedback session gave me some direction and purpose.

Question Set 6 (performance feedback showed areas which needed improvement)

034. The feedback session really pinpointed areas for improvement.

039. The feedback session has been my guide for correcting weaknesses.

Question Set 7 (performance feedback helped me understand my job better)

029. The feedback session really made me think about working smarter on the job.

040. I understood the meaning of each performance area better after the feedback session.

Question Set 8 (performance feedback was poorly timed)

041. The feedback session was too rushed.

042. I received no advance notice about the feedback session.

Question Set 9 (performance feedback was frustrating)

035. The feedback session was frustrating.

Question Set 10 (performance feedback was disorganized)

036. The feedback session was disorganized.

Question Set 11 (performance feedback was conducted by a supervisor who was not well trained)

038. The supervisor who conducted the feedback session was not well trained.

Appendix C: Formulas

Sum of Squares for Treatment (SST)

$$\sum n_i (\overline{y}_i - \overline{y})^2$$

Sum of Squares for Error (SSE)

$$\sum (y_{ij} - \overline{y}_i)^2$$

Mean Square for Treatments (MST)

$$\frac{SST}{p - 1}$$

Mean Square for Error (MSE)

$$\frac{SSE}{n - p}$$

F Statistic

$$F = \frac{MST}{MSE}$$

Regression Residual

$$y - \hat{y}$$

Standard Deviation of Regression Residuals

$$s = \sqrt{\frac{SSE}{n - (k + 1)}}$$

```
OPTIONS PAGESIZE=66 LINESIZE=70 NODATE;
FILENAME DATASET 'PRETEST.DAT';
DATA PRETEST;
INFILE PRETEST;
INPUT TESTNO 1-8 Q1 9 Q2 10 Q3 11 Q4 12 Q5 13 Q6 14 Q7 15 Q8 16
Q9 17 Q10 18 Q11 19 Q12 20 Q13 21 Q14 22 Q15 23 Q16 24 Q17 25 Q18
26 Q19 27 Q20 28 Q21 29 Q22 30 Q23 31 Q24 32 Q25 33 Q26 34 Q27 35
Q28 36 Q29 37 Q30 38 Q31 39 Q32 40 Q33 41 Q34 42 Q35 43 Q36 44
Q37 45 Q38 46 Q39 47 Q40 48 Q41 49 Q42 50 Q43 51 Q44 52 Q45 53
Q46 54 Q47 55 Q48 56 Q49 57;

QS1 = (Q10 + Q12 + (8 - Q20))/3;
QS2 = (Q11 + Q16 + (8 - Q14))/3;
QS3 = (Q15 + Q19 + (8 - Q21))/3;
QS4 = (Q13 + Q17 + (8 - Q18))/3;
JOBKNO = (QS1 + QS2 + QS3 + QS4)/4;

PFQS1 = Q1;
PFQS2 = Q3;
PFQS3 = Q4;
PFQS4 = Q5;
PFQS5 = Q7;
PFQS6 = Q6;
PFQS7 = Q49;
PFQS8 = Q8;
PFQS9 = (Q27 + Q31)/2;
PFQS10 = (Q23 + Q26 + Q32 + Q43 + Q46)/5;
PFQS11 = (Q22 + Q24 + Q44 + Q45 + Q47)/5;
PFQS12 = (Q25 + Q28 + Q37)/3;
PFQS13 = (Q30 + Q33)/2;
PFQS14 = (Q34 + Q39)/2;
PFQS15 = (Q29 + Q40)/2;
PFQS16 = (Q41 + Q42)/2;
PFQS17 = Q35;
PFQS18 = Q36;
PFQS19 = Q38;

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Q3X17 = PFQS3*PFQS17;
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PROC REG DATA=PRETEST;
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PFQS18 PFQS19 Q1X2 Q1X3 Q1X4 Q1X5 Q1X6 Q1X7 Q1X8 Q1X9 Q1X10 Q1X11
Q1X12 Q1X13 Q1X14 Q1X15 Q1X16 Q1X17 Q1X18 Q1X19 Q2X3 Q2X4 Q2X5
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Q5X17 Q5X18 Q5X19 Q6X7 Q6X8 Q6X9 Q6X10 Q6X11 Q6X12 Q6X13 Q6X14
Q6X15 Q6X16 Q6X17 Q6X18 Q6X19 Q7X8 Q7X9 Q7X10 Q7X11 Q7X12 Q7X13
Q7X14 Q7X15 Q7X16 Q7X17 Q7X18 Q7X19 Q8X9 Q8X10 Q8X11 Q8X12 Q8X13
Q8X14 Q8X15 Q8X16 Q8X17 Q8X18 Q8X19 Q9X10 Q9X11 Q9X12 Q9X13 Q9X14
Q9X15 Q9X16 Q9X17 Q9X18 Q9X19 Q10X11 Q10X12 Q10X13 Q10X14 Q10X15
Q10X16 Q10X17 Q10X18 Q10X19 Q11X12 Q11X13 Q11X14 Q11X15 Q11X16
Q11X17 Q11X18 Q11X19 Q12X13 Q12X14 Q12X15 Q12X16 Q12X17 Q12X18
Q12X19 Q13X14 Q13X15 Q13X16 Q13X17 Q13X18 Q13X19 Q14X15 Q14X16
Q14X17 Q14X18 Q14X19 Q15X16 Q15X17 Q15X18 Q15X19 Q16X17 Q16X18
Q16X19 Q17X18 Q17X19 Q18X19 SQX1 SQX2 SQX3 SQX4 SQX5 SQX6 SQX7
SQX8 SQX9 SQX10 SQX11 SQX12 SQX13 SQX14 SQX15 SQX16 SQX17 SQX18
SQX19/SLE=.1 SLS=.1;
```

```
PROC UNIVARIATE DATA=PRETEST NORMAL PLOT;
    VAR PFQS1 PFQS2 PFQS3 PFQS4 PFQS5 PFQS6 PFQS7 PFQS8 PFQS9
PFQS10 PFQS11 PFQS12 PFQS13 PFQS14 PFQS15 PFQS16 PFQS17 PFQS18
PFQS19 Q1X2 Q1X3 Q1X4 Q1X5 Q1X6 Q1X7 Q1X8 Q1X9 Q1X10 Q1X11 Q1X12
Q1X13 Q1X14 Q1X15 Q1X16 Q1X17 Q1X18 Q1X19 Q2X3 Q2X4 Q2X5 Q2X6
Q2X7 Q2X8 Q2X9 Q2X10 Q2X11 Q2X12 Q2X13 Q2X14 Q2X15 Q2X16 Q2X17
Q2X18 Q2X19 Q3X4 Q3X5 Q3X6 Q3X7 Q3X8 Q3X9 Q3X10 Q3X11 Q3X12 Q3X13
Q3X14 Q3X15 Q3X16 Q3X17 Q3X18 Q3X19 Q4X5 Q4X6 Q4X7 Q4X8 Q4X9
Q4X10 Q4X11 Q4X12 Q4X13 Q4X14 Q4X15 Q4X16 Q4X17 Q4X18 Q4X19 Q5X6
Q5X7 Q5X8 Q5X9 Q5X10 Q5X11 Q5X12 Q5X13 Q5X14 Q5X15 Q5X16 Q5X17
Q5X18 Q5X19 Q6X7 Q6X8 Q6X9 Q6X10 Q6X11 Q6X12 Q6X13 Q6X14 Q6X15
Q6X16 Q6X17 Q6X18 Q6X19 Q7X8 Q7X9 Q7X10 Q7X11 Q7X12 Q7X13 Q7X14
Q7X15 Q7X16 Q7X17 Q7X18 Q7X19 Q8X9 Q8X10 Q8X11 Q8X12 Q8X13 Q8X14
Q8X15 Q8X16 Q8X17 Q8X18 Q8X19 Q9X10 Q9X11 Q9X12 Q9X13 Q9X14 Q9X15
Q9X16 Q9X17 Q9X18 Q9X19 Q10X11 Q10X12 Q10X13 Q10X14 Q10X15 Q10X16
Q10X17 Q10X18 Q10X19 Q11X12 Q11X13 Q11X14 Q11X15 Q11X16 Q11X17
Q11X18 Q11X19 Q12X13 Q12X14 Q12X15 Q12X16 Q12X17 Q12X18 Q12X19
Q13X14 Q13X15 Q13X16 Q13X17 Q13X18 Q13X19 Q14X15 Q14X16 Q14X17
Q14X18 Q14X19 Q15X16 Q15X17 Q15X18 Q15X19 Q16X17 Q16X18 Q16X19
Q17X18 Q17X19 Q18X19 SQX1 SQX2 SQX3 SQX4 SQX5 SQX6 SQX7 SQX8
SQX9 SQX10 SQX11 SQX12 SQX13 SQX14 SQX15 SQX16 SQX17 SQX18;
    TITLE 'NORMALITY TEST';

PROC ANOVA DATA=PRETEST;
    CLASS PFQS1 PFQS2 PFQS3 PFQS4 PFQS5 PFQS6 PFQS7 PFQS8 PFQS9
PFQS10 PFQS11 PFQS12 PFQS13 PFQS14 PFQS15 PFQS16 PFQS17 PFQS18
PFQS19;
    MODEL JOBKNO=PFQS1 PFQS2 PFQS3 PFQS4 PFQS5 PFQS6 PFQS7 PFQS8
PFQS9 PFQS10 PFQS11 PFQS12 PFQS13 PFQS14 PFQS15 PFQS16 PFQS17
PFQS18 PFQS19;
    TITLE 'ANALYSIS OF VARIANCE FOR JOB KNOWLEDGE';

run;
```

Appendix E: Enlisted Evaluation Performance System Survey

USAF Survey Control Number

GENERAL INFORMATION

The purpose of this questionnaire is to obtain data concerning your perceptions of the enlisted evaluation performance feedback system. An effective performance appraisal system can significantly contribute to an organization's productivity. Therefore, it is in the best interest of the Air Force to have an effective performance appraisal system. The results from this questionnaire will be used for data purposes only. Personal information will be used for classification purposes only.

INSTRUCTIONS

Please use the enclosed AFIT DATA COLLECTION FORM when filling out this survey. If the collection form is lost or is damaged, please write your answers on the questionnaire and return it instead of the AFIT Data Collection Form.

- ***This survey is strictly anonymous.***

Some rules to remember when filling out this form:

- **Use only a number 2 pencil.**

- **Make dark marks that fill in the circle completely.**

- **Erase clearly any mark you wish to change.**

- **Make no stray marks.**

- **DO NOT fold the data collection form.**

- **DO NOT put your name anywhere on the data collection form.**

- **DO NOT put your social security account number anywhere on the data collection form.**

- After you have filled out the data collection form, put the form and the survey questionnaire in the enclosed return envelope, seal the envelope, and mail it to us. Note: The postage on the return envelope is prepaid and the return address already appears on the envelope.

Fill out the rest of the data collection form beginning with question 001 (question 001 is located on the page which is marked AFIT DATA COLLECTION FORM).

Questionnaire

001. My rank is

1. E1, E2, or E3
2. E4
3. E5
4. E6
5. E7
6. E8
7. E9

002. My MAJCOM is

1. ATC
2. AFMC
3. ACC
4. Other

003. My skill level is

1. One Level
2. Three Level
3. Five Level
4. Seven level
5. Nine Level

004. My total number of years on active duty is

1. less than 1.
2. more than 1 but less than 4
3. more than 4 but less than 10
4. more than 10 but less than 15
5. more than 15 but less than 20
6. more than 20 but less than 26
7. more than 26

Note: If your total number of years on active duty is *exactly* one year, you should respond with answer 2. If your total number of years on active duty is *exactly* 4 years, you should respond with answer 3, and so on.

005. My highest PME is the

1. NCO Preparatory Course (NCOPC)
2. NCO Leadership School (NCOLS)
3. NCO Academy (NCOA)
4. Senior NCO Academy (SNCOA)
5. I have never completed a PME course.

006. My most recent PME was completed by

1. Correspondence
2. In-residence
3. I have never completed a PME course.

007. My most recent PME was completed

1. less than a month ago
2. 1-6 months ago
3. 6-12 months ago
4. more than 12 months ago
5. I have never completed a PME course.

008. My most recent performance feedback session (as the ratee) was conducted

1. less than a month ago
2. 1-6 months ago
3. 6-12 months ago
4. more than 12 months ago
5. I have never received performance feedback

009. The last time you received performance feedback was
the session documented on the Performance Feedback Worksheet (PFW)?

1. Yes
2. No
3. I have never received performance feedback

Please choose the number on the scale that best describes your opinion of these statements.

****

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Stongly Agree
1	2	3	4	5	6	7

****

When marking your data collection form, 1 (Strongly Disagree) corresponds to 1, 2 (Disagree) corresponds to 2, and so on.

010. I understand my responsibilities as an airman/NCO.

011. I feel my current skill level is commensurate with my capacity to accomplish my job.

012. My obligations as an airman/NCO are clear to me.

013. I have a clear understanding of the role I play in accomplishing the wing's mission.

014. My skill level does not do a good job of measuring my ability to do my job.

015. I understand the importance of my position within the squadron.

016. My job proficiency is accurately reflected by my skill level.

017. I understand the importance of my position within the wing.

018. The way in which my work impacts the effectiveness of the wing is not clear to me.

019. I realize the importance of my job with respect to accomplishing the goals of my squadron.

020. I do not understand my duties as an airman/NCO.

021. The way in which my work impacts the effectiveness of the squadron is not clear to me.

If you have never received performance feedback, you may skip to the last three questions of the survey.

Please choose the number on the scale that best describes your opinion of your most recent performance feedback session.

****

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Stongly Agree
1	2	3	4	5	6	7

****

When marking your data collection form, 1 (Strongly Disagree) corresponds to 1, 2 (Disagree) corresponds to 2, and so on.

022. The performance feedback session covered my entire job.

023. The discussion of my performance during the feedback session was covered objectively.

024. The feedback session was accurately conducted.

025. I didn't have to ask for clarification.

026. The feedback session was fair in every respect.

027. The feedback session really raised my anxiety level.

028. The purpose of the feedback session was not clear to me.

029. The feedback session really made me think about working smarter on the job.

030. The feedback session was encouraging to me personally.

031. I dreaded the actual feedback session itself.

032. The supervisor was straightforward in all phases of the feedback session.

033. The feedback session gave me some direction and purpose.

034. The feedback session really pinpointed areas for improvement.

035. The feedback session was frustrating.

036. The feedback session was disorganized.

037. I disliked the feedback session because the intent was not clear.

Please choose the number on the scale that best describes your opinion of your most recent performance feedback session.

****

Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Stongly Agree
1	2	3	4	5	6	7

****

When marking your data collection form, 1 (Strongly Disagree) corresponds to 1, 2 (Disagree) corresponds to 2, and so on.

038. The supervisor who conducted the feedback session was not well trained.

039. The feedback session has been my guide for correcting weaknesses.

040. I understood the meaning of each performance area better after the feedback session.

041. The feedback session was too rushed.

042. I received no advance notice about the feedback session.

043. During the feedback session, my performance was analyzed fairly.

044. I was often upset because the feedback session data were inaccurate.

045. My record, as it was introduced in the feedback session, contained no errors.

046. I was worried that the feedback session worksheet would not be kept confidential.

047. Specific examples of my performance were cited.

Questions 48 and 49 should be answered on the page of the data collection form which is marked YOUR WORK GROUP CODE.

048. Fill in the circles corresponding to your Air Force Specialty Code (in the section titled "YOUR AFSC").

049. Fill in the circle corresponding to your answer to the question "ARE YOU A SUPERVISOR?".

050. If you have any additional comments about the enlisted performance feedback system or this questionnaire, please write them on the back of this page.

Thank You for Your Participation

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Vita

Captain Dee Jay Jackson was born on 2 October 1955 in Paintsville, Kentucky. He graduated from Paintsville High School in Paintsville, Kentucky in 1974. After graduation from high school, he entered the United States Army as a Medical Corpsman for a term of 2 years. He continued his education and received a Bachelor of Science in Microbiology in 1984 from the University of Kentucky. During his graduate program he entered the Reserve Officer Training Corps (ROTC) program at the University of Kentucky. In 1986, he received a Master of Science in Microbiology and was commissioned in the United States Air Force. At the completion of ROTC, he was assigned to Chanute AFB, Illinois. While at Chanute AFB, he attended the Aircraft Maintenance Officer Course. His next assignment was at Randolph AFB, Texas. While at Randolph AFB, he filled several positions: OIC T-38 Flight Line, OIC Propulsion Branch, OIC T-37 Flight Line, and OIC Job Control. In May 1991 Captain Jackson entered the Graduate Acquisition Logistics program at the Air Force Institute of Technology's School of Systems and Logistics.

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Vita

Captain Mark A. Ward was born on 23 March 1960 at Eglin AFB, Florida. He graduated from Samuel Clemens High School in Schertz, Texas, in 1978 and enlisted in the United States Air Force. He attended technical school at the School of Health Care Sciences, graduating as Medical Laboratory Specialist. Upon graduation, he was stationed at Wilford Hall Medical Center at Lackland AFB, Texas. Captain Ward left the Air Force in 1982, attended Texas A&M University, and joined the Corps of Cadets, graduating with a Bachelor of Science in Political Science in August 1986. Upon graduation, he received a commission in the USAF and entered training at Chanute AFB, Illinois, in the Aircraft Maintenance Officer Course (AMOC). After earning honors as a distinguished graduate at AMOC, Captain Ward was assigned to Dyess AFB, Texas, as a maintenance officer where he served at various positions within the maintenance complex until entering the School of Systems and Logistics, Air Force Institute of Technology, in May 1991.

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13. ABSTRACT *(Maximum 200 words)*

This research evaluated the effectiveness of the enlisted evaluation performance feedback system. The Air Force created the feedback system because many airmen, especially those in lower ranks, did not know or did not understand their duties. Therefore, for the purpose of this study, effectiveness was defined as the degree to which the Air Force model mimicked the ideal feedback model as formulated by the researcher's analysis of the literature. The researchers found evidence that the new Air Force feedback system is an improvement over the old design. Under the old system, the only regulated means of providing feedback was a formal report which was issued, on the average, once a year. Since it was a formal rating, it was subject to several problems, not the least of which was a tendency towards inflationary ratings. These problems made the system somewhat ineffective with respect to making it a useful tool for providing feedback to airmen and NCOs. The new procedure, with its regulated informal structure, is much more efficient at providing accurate and timely feedback.

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a. Highly Significant b. Significant c. Slightly Significant d. Of No Significance

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